

Application No.: 10/777,543
Response Dated: March 25, 2010
Response to Notice of: November 25, 2009

Amendments to the Claims

Please amend the claims as follows:

Listing of Claims:

1. (Currently amended) A method of detecting whether a patient has asymptomatic coronary artery disease as distinguished from those who do not have coronary artery disease in which a sample taken from a human patient who is asymptomatic for coronary artery disease is analyzed for factors associated with coronary artery disease comprising the steps:

(a) obtaining the level of an atherogenic protein in a sample from the patient, obtaining the level of an acute phase reactant in a sample from the patient, and optionally obtaining the level of an anti-atherogenic protein in a sample from the patient, wherein at least one of the following monoclonal antibodies is used in an immunological assay to obtain the level of atherogenic protein: mAb-4E6 produced by hybridoma Hyb4E6 deposited with the BCCM (Belgian Coordinated Collections of Microorganisms) under deposit accession number LMBP 1660 CB, mAb-1H11 produced by hybridoma Hyb1H11 deposited with the BCCM under deposit accession number LMBP 1659 CB, and mAb-8A2 produced by hybridoma Hyb8A2 deposited with the BCCM under deposit accession number LMBP 1661 CB;

(b) obtaining at least one of:

(i) a first cut-point for the atherogenic protein and a second cut-point for the acute phase reactant,

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(ii) a third cut-point for the atherogenic protein and the acute phase reactant,

(iii) a fourth cut-point for the atherogenic protein and the acute phase reactant and a fifth cut-point for the anti-atherogenic protein,

(iv) a sixth cut-point for the atherogenic protein and a seventh cut-point for the acute phase reactant and the anti-atherogenic protein,

(v) an eighth cut-point for the atherogenic protein and the anti-atherogenic protein and a ninth cut-point for the acute phase reactant,

(vi) a tenth cut-point for the atherogenic protein, the acute phase reactant, and the anti-atherogenic protein,

(vii) an eleventh cut-point for the atherogenic protein, a twelfth cut-point for the acute phase reactant, and a thirteenth cut-point for the anti-atherogenic protein; and

(c) detecting whether the patient has asymptomatic coronary artery disease as distinguished from those who do not have coronary artery disease based on at least one of the following:

(i) a comparison to the first cut-point of a first value for the level of the atherogenic protein and a comparison to the second cut-point of a second value for the level of the acute phase reactant,

(ii) a comparison to the third cut-point of a third value for the levels of the atherogenic protein and acute phase reactant,

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(iii) a comparison to the fourth cut-point of a fourth value for the levels of the atherogenic protein and acute phase reactant and a comparison to the fifth cut-point of a fifth value for the level of the anti-atherogenic protein,

(iv) a comparison to the sixth cut-point of a sixth value for the level of the atherogenic protein and a comparison to the seventh cut-point of a seventh value for the levels of the acute phase reactant and anti-atherogenic protein,

(v) a comparison to the eighth cut-point of an eighth value for the levels of the atherogenic protein and anti-atherogenic protein and a comparison to the ninth cut-point of a ninth value for the level of the acute phase reactant,

(vi) a comparison to the tenth cut-point of a tenth value for the levels of the atherogenic protein, acute phase reactant, and anti-atherogenic protein, and

(vii) a comparison to the eleventh cut-point of an eleventh value for the level of the atherogenic protein, a comparison to the twelfth cut-point of a twelfth value for the level of the acute phase reactant, and a comparison to the thirteenth cut-point of a thirteenth value for the level of the anti-atherogenic protein.

2. (Original) The method of claim 1 wherein the atherogenic protein comprises OxLDL (oxidized low density lipoprotein).

3. (Original) The method of claim 2 wherein the OxLDL contains at least 60 substituted lysine residues per apo B-100 (apolipoprotein B-100) moiety.

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4. (Original) The method of claim 1 wherein the acute phase reactant comprises a positive acute phase reactant or a negative acute phase reactant.

5. (Original) The method of claim 4 wherein the positive acute phase reactant is selected from the group consisting of C-reactive protein, serum amyloid A, von Willebrand factor, ferritin, and fibrinogen and the negative acute phase reactant is selected from the group consisting of albumin, apo A-I (apolipoprotein A-I), apo A-II (apolipoprotein A-II), and HDL (high density lipoprotein).

6. (Original) The method of claim 1 wherein the anti-atherogenic protein comprises HDL.

7. (Original) The method of claim 1 wherein the atherogenic protein comprises OxLDL and the acute phase reactant is selected from the group consisting of C-reactive protein and fibrinogen.

8. (Original) The method of claim 7 wherein the anti-atherogenic protein comprises HDL.

9-11. (Cancelled)

12. (Previously presented) The method of claim 1 wherein the atherogenic protein comprises an atherogenic low density lipoprotein.

13-14. (Cancelled)

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15. (Original) The method of claim 13 wherein in step (a) the level of anti-atherogenic protein is obtained and the anti-atherogenic protein comprises HDL.

16. (Original) The method of claim 13 wherein the acute phase reactant is selected from the group consisting of C-reactive protein and fibrinogen.

17. (Original) The method of claim 16 wherein in step (a) the level of anti-atherogenic protein is obtained and the anti-atherogenic protein comprises HDL.

18. (Original) The method of claim 13 wherein the OxLDL contains at least 60 substituted lysine residues per apo B-100 moiety.

19. (Original) The method of claim 18 wherein in step (a) the level of anti-atherogenic protein is obtained and the anti-atherogenic protein comprises HDL.

20. (Original) The method of claim 19 wherein the acute phase reactant is selected from the group consisting of C-reactive protein and fibrinogen.

21. (Cancelled)

22. (Currently amended) A method of providing a medical professional with information based on a sample obtained from a human patient who is asymptomatic for coronary artery disease for the medical professional to use in determining whether the individual has coronary artery disease as distinguished from those who do not have coronary artery disease comprising the steps:

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(a) obtaining the level of an atherogenic protein in a sample from the patient, obtaining the level of an acute phase reactant in a sample from the patient, and optionally obtaining the level of an anti-atherogenic protein in a sample from the patient, wherein at least one of the following monoclonal antibodies is used in an immunological assay to obtain the level of atherogenic protein: mAb-4E6 produced by hybridoma Hyb4E6 deposited with the BCCM (Belgian Coordinated Collections of Microorganisms) under deposit accession number LMBP 1660 CB, mAb-1H11 produced by hybridoma Hyb1H11 deposited with the BCCM under deposit accession number LMBP 1659 CB, and mAb-8A2 produced by hybridoma Hyb8A2 deposited with the BCCM under deposit accession number LMBP 1661 CB;

(b) obtaining at least one of:

(i) a first cut-point for the atherogenic protein and a second cut-point for the acute phase reactant,

(ii) a third cut-point for the atherogenic protein and the acute phase reactant,

(iii) a fourth cut-point for the atherogenic protein and the acute phase reactant and a fifth cut-point for the anti-atherogenic protein,

(iv) a sixth cut-point for the atherogenic protein and a seventh cut-point for the acute phase reactant and the anti-atherogenic protein,

(v) an eighth cut-point for the atherogenic protein and the anti-atherogenic protein and a ninth cut-point for the acute phase reactant,

(vi) a tenth cut-point for the atherogenic protein, the acute phase reactant, and the anti-atherogenic protein,

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(vii) an eleventh cut-point for the atherogenic protein, a twelfth cut-point for the acute phase reactant, and a thirteenth cut-point for the anti-atherogenic protein;

(c) providing to the medical professional at least one of:

(i) a first value for the level of the atherogenic protein and a second value for the level of the acute phase reactant,

(ii) a third value for the levels of the atherogenic protein and acute phase reactant,

(iii) a fourth value for the levels of the atherogenic protein and acute phase reactant and a fifth value for the level of the anti-atherogenic protein,

(iv) a sixth value for the level of the atherogenic protein and a seventh value for the levels of the acute phase reactant and anti-atherogenic protein,

(v) an eighth value for the levels of the atherogenic protein and anti-atherogenic protein and a ninth value for the level of the acute phase reactant, and

(vi) a tenth value for the levels of the atherogenic protein, acute phase reactant, and anti-atherogenic protein,

(vii) an eleventh value for the level of the atherogenic protein, a twelfth value for the level of the acute phase reactant, and a thirteenth value for the level of the anti-atherogenic protein; and

(d) providing to the medical professional the appropriate one or more of the cut-points for the medical professional to determine whether the patient has asymptomatic coronary artery disease as distinguished from those who do not have coronary artery disease based on at least one of the following:

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- (i) a comparison to the first cut-point of the first value and a comparison to the second cut-point of the second value,
- (ii) a comparison to the third cut-point of the third value,
- (iii) a comparison to the fourth cut-point of the fourth value and a comparison to the fifth cut-point of the fifth value,
- (iv) a comparison to the sixth cut-point of the sixth value and a comparison to the seventh cut-point of the seventh value,
- (v) a comparison to the eighth cut-point of the eighth value and a comparison to the ninth cut-point of the ninth value,
- (vi) a comparison to the tenth cut-point of the tenth value, and
- (vii) a comparison to the eleventh cut-point of the eleventh value, a comparison to the twelfth cut-point of the twelfth value, and a comparison to the thirteenth cut-point of the thirteenth value.

23. (Original) The method of claim 22 wherein the atherogenic protein comprises OxLDL.

24. (Original) The method of claim 23 wherein the OxLDL contains at least 60 substituted lysine residues per apo B-100 moiety.

25. (Original) The method of claim 22 wherein the acute phase reactant comprises a positive acute phase reactant or a negative acute phase reactant.

26. (Original) The method of claim 25 wherein the positive acute phase reactant is selected from the group consisting of C-reactive protein, serum amyloid A,

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von Willebrand factor, ferritin, and fibrinogen and the negative acute phase reactant is selected from the group consisting of albumin, apo A-I, apo A-II, and HDL.

27. (Original) The method of claim 22 wherein the anti-atherogenic protein comprises HDL.

28. (Original) The method of claim 22 wherein the atherogenic protein comprises OxLDL and the acute phase reactant is selected from the group consisting of C-reactive protein and fibrinogen.

29. (Original) The method of claim 28 wherein the anti-atherogenic protein is HDL.

30-32. (Cancelled)

33. (Previously presented) The method of claim 22 wherein the atherogenic protein comprises an atherogenic low density lipoprotein.

34. (Previously presented) The method of claim 22 wherein the atherogenic protein comprises OxLDL.

35. (Cancelled)

36. (Original) The method of claim 34 wherein in step (a) the level of anti-atherogenic protein is obtained and the anti-atherogenic protein comprises HDL.

37. (Original) The method of claim 34 wherein the acute phase reactant is selected from the group consisting of C-reactive protein and fibrinogen.

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38. (Original) The method of claim 37 wherein in step (a) the level of anti-atherogenic protein is obtained and the anti-atherogenic protein comprises HDL.

39. (Original) The method of claim 34 wherein the OxLDL contains at least 60 substituted lysine residues per apo B-100 moiety.

40. (Original) The method of claim 39 wherein in step (a) the level of anti-atherogenic protein is obtained and the anti-atherogenic protein comprises HDL.

41. (Original) The method of claim 40 wherein the acute phase reactant is selected from the group consisting of C-reactive protein and fibrinogen.

42-88. (Cancelled).